

## **Nebulizer Administration – September 2021**

### **Equipment:**

- Medication
- Nebulizer machine (air compressor)
- Connecting tubing
- Facemask, or a mouthpiece held in the mouth
- Cleaning materials (See EPA List N: Disinfectants for Use Against SARS-CoV-2 (COVID-19))
- Individualized Health Plan (IHP)/Asthma Action Plan and/or Healthcare provider's orders

### **COVID-19 Considerations:**

- **Due to COVID-19 it is recommended that nebulizer treatments not be used in the school setting. Albuterol should be administered via inhaler if possible.**
- Only the student and staff responsible for administering the nebulizer should be in the room, and if appropriate, the staff member may leave the room.
- Keep the door closed during the nebulizer treatment.
- If there is a window in the room where the nebulizer is being administered, the window should remain open during the procedure, if possible.
- If possible and not contraindicated due to student's asthma triggers, consider administering the nebulizer outside where air is not recirculated into the school and dependent surfaces can be easier to clean.
- The room should be left vacant, with the door closed for 30 minutes after the student has left the room post nebulization.

### **Procedure:**

1. Position student
2. Explain the procedure to the student at his/her level of understanding
3. Encourage the student to assist in the procedure as much as he/she is able to help student learn self-care skills
4. Review IHP/Asthma Action Plan and/or healthcare provider's orders
5. Check for authorization forms/record
  - a. Medication Administration Form
  - b. Medical provider
  - c. Parent/guardian
6. Check for the Five Rights

- a. Right student
  - b. Correct time
  - c. The medicine container matches authorization forms and medication administration record
  - d. The dose on medication container matches authorization form and records
  - e. The medication is in the correct route as identified on medication container, authorization forms and medication record
7. Ensure that the medication has not expired
8. Wash hands
9. Don Personal Protective Equipment (PPE)
- a. Put on gown(optional)
  - b. Put on respirator or facemask
  - c. Put on face shield or goggles
  - d. Put on gloves
10. Set up and plug in the nebulizer machine in a location where the power source is close to a comfortable location for the medication to be administered
11. Follow the directions for the specific brand of nebulizer machine and cup
12. Unscrew top of nebulizer cup
13. Add medication into the bottom half of the nebulizer cup
14. Screw the top of the cup back on
15. Attach the tubing from the cup to the nebulizer machine and the cup on to the facemask or mouthpiece
16. Place either the facemask on the student or the mouthpiece in their mouth and turn on the machine. A mist of medication should rapidly appear
17. During the nebulizer treatment, maintain at least a 6-foot distance from the student
18. Instruct the student to take relatively normal slow deep breaths
19. Keep the nebulizer cup in an upright position
20. The cup may require some tapping on the sides toward the end of the treatment to optimize the completion of the dose
21. The treatment is complete when there is no more mist from the cup (usually 10–15 minutes)

22. Turnoff the machine
  23. Remove the mask or mouthpiece
  24. Rinse nebulizer cup, mouthpiece, or mask under warmwater
  25. Shake off excess water
  26. Place on paper towel to dry
  27. Reassess respiratory status
  28. Remove PPE
    - a. Remove and dispose of gloves
    - b. Remove and dispose gown
    - c. Perform hand hygiene
    - d. Remove face shield or goggles. If using a face shield the face shield can be cleaned and re-used, set aside and clean as directed once procedure is complete.
    - e. Remove and dispose of respirator or facemask
- (NOTE: CDC recommends disposing of respirator or facemask following use during aerosol generating procedures.)
29. Wash hands
  30. Document assessment, intervention and outcome in student's healthcare record
  31. Update parents/guardian and healthcare provider ,if needed
  32. After the nebulizer has been administered the room should be cleaned and disinfected following EPA guidelines

**Cleaning and storing immediately after nebulizer use:**

1. Perform hand hygiene
2. Put on gown
3. Put on facemask
4. Put on gloves
5. Take the nebulizer apart
6. Set tubing aside
7. Do not soak, wash or rinse tubing
  - a. Replace it if it becomes cloudy, discolored or wet inside

8. Wash the medicine cup and mask with warm, soapy water
9. Rinse the medicine cup and mask in warm water
10. Let all pieces air dry on a paper towel
11. When dry, put pieces in a plastic bag or container
12. Prior to removing PPE, clean the nebulizer machine
13. Wipe the machine with a damp cloth
14. Check the filter monthly a. Change the filter every six months or sooner if discolored
15. Remove and dispose of gloves
16. Remove and dispose of gown
17. Perform hand hygiene
18. Remove and dispose of facemask
19. Perform hand hygiene

**Disinfect nebulizer every 2-3 days:**

1. Place medicine cup and mask in half strength vinegar and soak for at least 20 minutes or overnight
2. Rinse with water
3. Let all pieces air dry on a paper towel
4. When dry, put pieces in a plastic bag or container

**References:**

Allergy and Asthma Network. (2020). *COVID 19 & respiratory tools: How to access, use and clean inhalers, nebulizers and more* [Webinar]. Retrieved July 9, 2020 from <https://allergyasthmanetwork.org/news/covid-19-respiratory-tools-how-to-access-use-and-clean-inhalers-nebulizers-more-webinar/>

American Academy of Pediatrics. (June 28, 2021). *Caring for Children and Youth With Special Health Care Needs During the COVID-19 Pandemic* <https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/caring-for-children-and-youth-with-special-health-care-needs-during-the-covid-19-pandemic/>



American College of Allergy, Asthma and Immunology. (March 23, 2020). *Nebulizer use during the COVID-19 pandemic*. <https://college.acaai.org/publications/college-insider/nebulizer-use-during-covid-19-pandemic>

Children's Hospital of Wisconsin. (2010). *Using a nebulizer with mask*.  
<http://www.chw.org/applications/TeachingSheets/5010EN.pdf>

Connecticut State Department of Education. (2012). *Clinical procedure guidelines for Connecticut school nurses*. Available at:  
[http://www.sde.ct.gov/sde/lib/sde/pdf/publications/clinical\\_guidelines/clinical\\_guidelines.pdf](http://www.sde.ct.gov/sde/lib/sde/pdf/publications/clinical_guidelines/clinical_guidelines.pdf)

Swarnakar, R., Gupta, N. M., Halder, I., Khilnani, G. C. *Guidance for nebulization during the COVID-19 pandemic*. Lung India. Published online 2020 Oct 16. doi: [10.4103/lungindia.lungindia\\_681\\_20](https://doi.org/10.4103/lungindia.lungindia_681_20)

United States Environmental Protection Agency. About List N: Disinfectants for Coronavirus (COVID-19). <https://www.epa.gov/coronavirus/about-list-n-disinfectants-coronavirus-covid-19-0>